## IN THE SPECIFICATION

Please replace the paragraph beginning on page 4, line 6 with the following replacement paragraph:

Note that the feedback from differential amplifier 205 is both negative and positive in that differential amplifier 205 receives the voltage from node A at its positive input and the voltage from node B at its negative input. If the voltage at node A is too high with respect to a desired operating voltage, differential amplifier 205 increases its output voltage so that the current through transistors M1 through M3 is reduced, thereby reducing the voltage across resistor R2 to bring the voltage at node A down. Similarly, if the voltage at node B is too low, differential amplifier decreases its output voltage so that the current in transistors M1 through M3 is increased, thereby increasing the voltage across resistor R3 to bring the voltage at node B up. In this fashion, equilibrium is reached such that the voltages of nodes A and B are kept substantially equal.

Please replace the paragraph beginning on page 5, line 11 with the following replacement paragraph:

These two voltages  $V_{BE1}$  and  $V_{BE2}$  may be used to derive the value of  $I_1$  (and hence  $I_2$  and  $I_3$ ) as follows. Current  $I_1$  must equal the sum of the current through resistance  $R_2$ , which equals  $V_{BE1}/R_2$ , and the current through diode  $D_1$ . Because the diode currents are the same, the current through diode  $D_1$  equals the current through variable resistance  $R_1$ . In turn, the current through variable resistance  $R_1$  equals ( $V_{BE1} - V_{BE2}$ )/  $R_1$ . Thus, the currents  $I_1$ ,  $I_2$ , and  $I_3$  may be expressed as:

$$I_1 = I_2 = I_3 = (1/R_2) * [V_{BE1} + \Delta V_{BE} * R_2/R_1]$$
 Eq. (1)

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where  $\Delta V_{BE2} = V_{BE1} - V_{BE2}$ . As discussed above, a voltage such as  $V_{BE1}$  will have a CTAT dependency whereas a voltage such as  $\Delta V_{BE}$  will have a PTAT dependency. In particular, the voltage  $\Delta V_{BE}$  equals  $V_T$  in (n), which in turn equals (kT/q) \* ln(n), where  $V_T$  is the thermal voltage, k is Boltzmann's constant, n is the cross sectional ratio (area of  $D_2$ )/(area of  $D_1$ ), and q is the electronic charge. Thus, the bracketed component in equation (1) depends upon the summation of a PTAT voltage and a CTAT voltage. By proper compensation of these PTAT and CTAT components, currents  $I_1$  through  $I_3$  may be made stable with respect to changes in temperature. The output voltage  $V_{\text{out}}$ , which depends upon the product of a variable resistance  $R_4$  and current  $I_3$ , becomes:

$$V_{out} = (R_4/R_2) * [V_{BE1} + \Delta V_{BE} * R_2/R_1]$$
 Eq. (2)

Thus, by varying the resistance  $R_1$ , the balance between the PTAT and CTAT voltage contributions may be changed to ensure that  $V_{out}$  is stable with respect to changes in temperature. Similarly, by varying the resistance  $R_4$ , the output voltage level for  $V_{out}$  may be changed. The variation of  $R_1$  will be discussed first.